



MEMORANDUM

TO: JIMMY GRIESS
FROM: STACEY CLEAR, P.E.
DATE: January 24, 2022
SUBJECT: ROUNDABOUT

The City of Algona is interested in a roundabout located at the intersection of Algona Blvd., Main St., and Broadway Blvd.

Matt Palmer, P.E. of Gibson Traffic has been preparing a traffic study throughout the City including analysis of this location. Although the final results have not been prepared in written form, he determined that the roundabout is not warranted in this location and has recommended against it due to the low volumes of traffic, the level of service of the intersection and its low collision history (i.e. no collisions have occurred at the intersection).

With this information in hand, at the City's request, Gray & Osborne continued to prepared a preliminary layout for a roundabout in this location. Due to the angles of the existing roads and the widths of the existing rights-of-way, two roundabouts were rendered. The City could potentially install a single roundabout if additional right-of-way and/or easements were purchased.

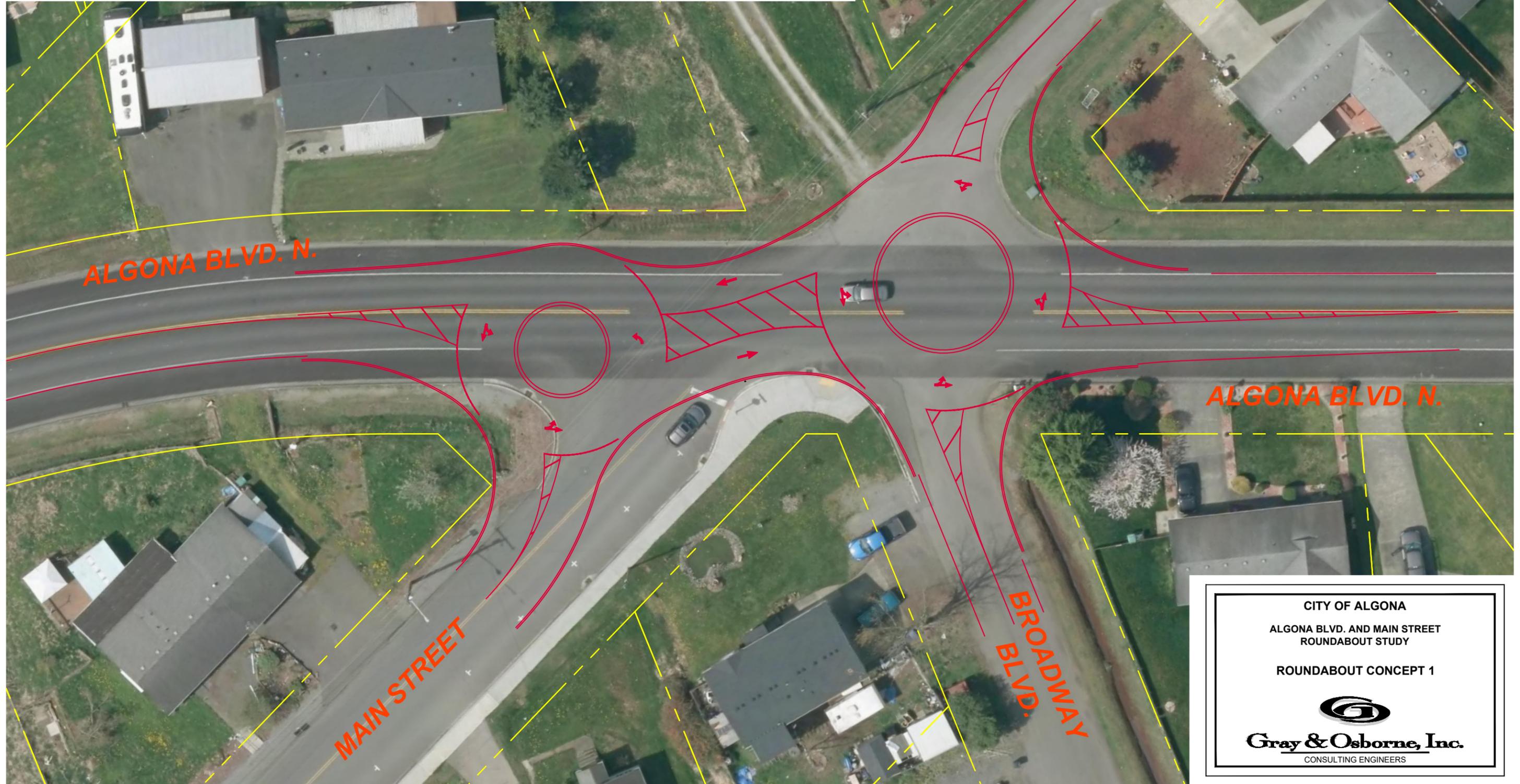
In addition to the layout, Gray & Osborne also prepared a preliminary cost for the project. It is estimated this project would have a total project cost (including engineering design and construction management) of approximately \$623,000. The detailed estimate is attached to this memorandum. It is likely the City would need to fund this themselves. Since the roundabout is unwarranted, it would be very difficult to get grant funding for this project.



NOTES:

1. South roundabout ICD = 72'; north roundabout ICD = 80'.
2. Circulating Travel Lane width = 18'
3. Conceptual layout only; not all features are shown for clarity.

UPDATE: November 4, 2021



CITY OF ALGONA
ALGONA BLVD. AND MAIN STREET
ROUNDBOUT STUDY
ROUNDBOUT CONCEPT 1

Gray & Osborne, Inc.
CONSULTING ENGINEERS

CITY OF ALGONA
Algona Boulevard and Main Street Roundabout Study
CONCEPT COST ESTIMATE
January 24, 2022

NO.	ITEM	QTY.		UNIT PRICE	AMOUNT
1	Minor Changes (1-04.4(1))	1	CALC	\$ 5,000.00	\$5,000.00
2	SPCC Plan (1-07.15(1))	1	LS	\$ 800.00	\$800.00
3	Mobilization (1-09.7)	1	LS	\$ 61,100.00	\$61,100.00
4	Project Temporary Traffic Control (1-10.4(1))	1	LS	\$ 70,000.00	\$70,000.00
5	Portable Changeable Message Sign (1-10.5)	1,440	HR	\$ 8.00	\$11,520.00
6	Removal of Structure and Obstruction (2-02.5)	1	LS	\$ 5,000.00	\$5,000.00
7	Gravel Borrow, Incl. Haul (2-03.5)	320	TN	\$ 30.00	\$9,600.00
8	Locate Existing Utilities (2-09.5)	1	LS	\$ 5,000.00	\$5,000.00
9	Crushed Surfacing Top Course (4-04.5)	235	TN	\$ 60.00	\$14,100.00
10	HMA CI 1/2" PG 64-22 (5-04.5)	375	TN	\$ 120.00	\$45,000.00
11	Planing Bituminous Pavement (5-04.5)	430	SY	\$ 10.00	\$4,300.00
12	Pavement Repair Excavation, Incl. Haul (5-04.5)	350	SY	\$ 35.00	\$12,250.00
13	Storm Drainage Improvements, Complete	1	LS	\$ 30,000.00	\$30,000.00
14	Adjust Manhole, Replace Casting (7-05.5)	1	EA	\$ 900.00	\$900.00
15	Adjust Catch Basin (7-05.5)	4	EA	\$ 500.00	\$2,000.00
16	Adjust Valve Box, Replace Casting (7-12.5)	4	EA	\$ 500.00	\$2,000.00
17	Erosion/Water Pollution Control (8-01.5)	1	LS	\$ 10,000.00	\$10,000.00
18	Landscaping (8-01.5)	1	LS	\$ 10,000.00	\$10,000.00
19	Cement Concrete Traffic Curb and Gutter (8-04.5)	320	LF	\$ 40.00	\$12,800.00
20	Cement Concrete Driveway Entrance (8-06.5)	10	SY	\$ 70.00	\$700.00
21	Precast Sloped Mountable Curb (8-07.5)	290	LF	\$ 35.00	\$10,150.00
22	Flexible Guide Post (8-10.5)	12	EA	\$ 60.00	\$720.00
23	Adjust Monument Case and Cover (8-13.5)	2	EA	\$ 400.00	\$800.00
24	Mailbox Support (8-18.5)	2	EA	\$ 400.00	\$800.00
24	Sidewalk / ADA Ramps	1	LS	\$ 25,000.00	\$25,000.00
25	Illumination System, Complete (8-20.5)	1	LS	\$ 10,000.00	\$10,000.00
26	Permanent Signing (8-21.5)	1	LS	\$ 2,500.00	\$2,500.00
27	Paint Line (8-22.5)	320	LF	\$ 1.00	\$320.00
28	Paint Line w/ RPMs (8-22.5)	1,410	LF	\$ 2.00	\$2,820.00
29	Plastic Wide Line (8-22.5)	230	LF	\$ 6.00	\$1,380.00
30	Plastic Traffic Arrow (8-22.5)	10	EA	\$ 200.00	\$2,000.00
	Subtotal				\$368,560.00
	No Sales Tax, per Revenue Rule 171				\$0.00
	20% Contingency				\$73,712.00
	Total Estimated Construction Cost				\$442,300.00
	Preliminary Engineering (15% of Construction Cost), Locally Funded				\$66,400.00
	Construction Management (20% of Construction Cost)				\$88,500.00
	ROW Purchase / Easements				\$25,000.00
	Total Project Cost				\$622,200.00
	Assumptions				
	Plane off 2" of HMA				
	Replace with 2" of HMA				
	New Pavement Section: 3" HMA + 4" CSTC				
	Sloped Mountable Curb per WSDOT STD. Plan F-10.62-02, 3" lip and 6" high				
	Pavement inside central islands: 3" HMA + 3" CSTC				